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(54) Title: VACCINE COMPOSITION

(57) Abstract: The present invention relates to vaccine compositions for the effective prevention or treatment of neisserial, preferably meningococcal, disease. The vaccines of the invention comprise a multivalent meningococcal bled composition comprising at least one bleb with homologous bactericidal activity which is derived from a meningococcal strain with a serosubtype that is prevalent in a country of use, and at least one bleb with heterologous bactericidal activity which is derived from a meningococcal strain which need not have a serosubtype that is prevalent in the country of use.

INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61K39/095

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

BIOSIS, EPO-Internal, WPI Data, EMBASE, PAJ, CHEM ABS Data, MEDLINE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
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| Y | claims 1,5,7,10,14-16,29 page 14, line 24 -page 15, line 12 page 18, line 31 -page 19, line 8 page 24, line 29-32 page 26, line 16-26 page 27, line 4-11 -& MOE-GR: "Differences in surface expression of NspA among Neisseria meningitidis group B strains" INFECTION AND IMMUNITY, vol. 67, no. 11, November 1999 (1999-11), pages 5664-5675, XP002266209 table 1 --- -/- | 1-19 |

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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- *A* document defining the general state of the art which is not considered to be of particular relevance
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- *O* document referring to an oral disclosure, use, exhibition or other means
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T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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Name and mailing address of the ISA

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Lechner, O

INTERNATIONAL SEARCH REPORT

International Application No
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| C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT | | |
|------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
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| A | SACCHI CLAUDIO T ET AL: "Serosubtypes and PorA types of Neisseria meningitidis serogroup B isolated in Brazil during 1997-1998: Overview and implications for vaccine development" JOURNAL OF CLINICAL MICROBIOLOGY, vol. 39, no. 8, August 2001 (2001-08), pages 2897-2903, XP002263474 ISSN: 0095-1137 abstract --- | 1-19 |
| A | VAN DER VOORT EILEENE ROUPPE ET AL: "Immunogenicity studies with a genetically engineered hexavalent PorA and a wild-type meningococcal group B outer membrane vesicle vaccine in infant cynomolgus monkeys" VACCINE, vol. 18, no. 14, 31 January 2000 (2000-01-31), pages 1334-1343, XP002263475 ISSN: 0264-410X abstract --- -/-- | 1-19 |

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International Application No
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| C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT | | |
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| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
| A | <p>DE KLEIJN E D ET AL: "Immunogenicity and safety of a hexavalent meningococcal outer-membrane-vesicle vaccine in children of 2-3 and 7-8 years of age." VACCINE. ENGLAND 14 FEB 2000, vol. 18, no. 15, 14 February 2000 (2000-02-14), pages 1456-1466, XP002263476 ISSN: 0264-410X abstract</p> | 1-19 |
| A | <p>TONDELLA MARIA LUCIA C ET AL: "Distribution of Neisseria meningitidis serogroup B serosubtypes and serotypes circulating in the United States" JOURNAL OF CLINICAL MICROBIOLOGY, vol. 38, no. 9, September 2000 (2000-09), pages 3323-3328, XP002263477 ISSN: 0095-1137 abstract</p> | 1-19 |
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INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP 03/06094

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
Although claim 18 is directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International Application No

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| Patent document cited in search report | | Publication date | Patent family member(s) | Publication date |
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